

The African in the New World: Their Contribution to Science, Invention and Technology

By John Henrik Clarke

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In this short talk on a subject that has many dimensions, and a long untold history, I am really talking about the impact of African people in the opening-up of the Americas and the Caribbean Islands. The appearance outside of Africa of African people in such large numbers tells us something about the greatest and most tragic forced migration of a people in human history. The exploitation of African people make what is called the New World possible, and the African's contribution to the sciences, invention and technology that made this new world possible, is part of a larger untold story. In the United States alone there is supporting literature and volumes of documents on this subject.

We need to examine the events in Africa and in Europe from 1400 through 1600 A.D. This is a pivotal turning point in world history. This was a period when Europe was awakening from the lethargy of its Middle Ages, learning again the maritime concepts of longitude and latitude and using her new skills in the handling of ships to enslave and colonize most of the world.

Europe recovered at the expense of African people. African people were soon scattered throughout the Caribbean, in several areas of South America and in the United States. A neglected drama in the history of dynamic social change had occurred in the year 711 A.D. when a combination of Africans, Arabs and Berbers conquered Spain and ruled the Iberian Peninsula for nearly eight hundred years. The aftermath of the African-Arab loss of Spain and the Arab's use of European mercenaries and equipment wreaked havoc throughout Africa and broke up the independent nations of inner Western Africa, mainly Songhay. This drama had to play itself out and the power of the Africans and the Arabs had to decline before the larger drama of the slave trade and, subsequently, colonialism could get well under way.

Africa was now suffering a second catastrophe. The first catastrophe was the Arab slave trade, which was totally unexpected, and came over six hundred years before the European slave trade. The second catastrophe was the Christian slave trade which started in the fifteenth and sixteenth century. Many Christians could not deal with what African religions were before the advent of Judaism, Christianity and Islam nor could they deal with early Christianity which was a carbon copy of African universal Spirituality. The first thing the Europeans did was to laugh at the African gods. Then they made the Africans laugh at their own gods. Europeans would go on to colonize the world. They not only colonized the world, they would also colonize information about the world, and that information is still colonized. What they would deal with was a carbon copy of Christianity as interpreted by foreigners. This was part of the catastrophe before it could recover its strength.

In the Americas and in the Caribbean Islands we find Bartholomew de las Casas, who came on Christopher Columbus' third voyage and who sanctioned the increase of the slave trade with the pretense that this would save the Indian population. When the Pope sent commissions to inquire into what was happening with the Indians, many of the islands did not have one Indian left, they were all dead. It was at Christopher Columbus' suggestion that the slave trade was increased to include more of the Africans, again, under the pretense of saving the Indians. It was the same Christopher Columbus who says in his diary, "As man and boy I sailed up and down the Guinea coast for twenty three years. ♦" What was he doing up and down the coast of West Africa for twenty-three years? The assumption is that he was part of the early Portuguese slave trade. Now is he still your hero? When you look at the Western hero and how he became a hero, when you look at all those people they called, "The Great," and find out what they were great for you will then have a new concept of history. There are a number of good books on this subject. Two of the more readable are by Eric Williams, late Prime Minister of Trinidad, formerly teacher of political science at Howard University. They are *Capitalism and Slavery*, and his last big book, *The Caribbean from Columbus to Castro*.

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The subject of this talk is really "The African Inventor in the New World and His Contribution to Technology, Medicine and Science." While I may be going the long way round, I'll get to the subject. But you will have to know what happened behind the curtain of slavery and the consequences of the Africans' enslavement and to what extent Europe recovered from its lethargy and to what extent Europe exploited people outside of Europe. But the main thing that you have to understand is that the African did not come into slavery culturally empty-handed. In order to stay in luxury, Europe had to have large bodies of people to exploit outside of Europe where they could get land and labor cheap. Where they could get control of other people's resources, cheap or for nothing. This is what apartheid is really all about. It is about Western control of the mineral wealth of the African. Africa is the world's richest continent, full of poor people, people who are poor because someone else is managing their resources. Do you think that if Africans had all the gold and manganese and zinc and bauxite and uranium that comes out of Africa they would be going around begging anybody for anything, drought or no drought? Have you ever sailed down the Congo River and seen all the vast bodies of water flowing into the sea? The Nile River sustained the greatest civilization the world has ever known, and it rarely ever rains in the Nile River. Yet this one river sustained civilizations for thousands of years, because Africans, at that time, knew what to do with water, and how to direct it in the way they needed it.

Still going to my subject, my point is that the African was brought to the Western world and survived through his inventiveness, imagination and his spiritual attitude. Without these he would have not survived. The African was hit harder than the so-called Indian. Where one died the other would survive. It is not that one had spiritual attitude and the other did not, they both had spiritual attitude and they both had culture. But many of the Africans had come out of pluralistic cultures and were more accustomed to the nature of change.

Now, let's get on to the African's inventive mind. The preface to all of this is to deal with the free African craftsman in the Western world and how these craftsmen became free, that is, "free" with a question mark! In the Caribbean where Africans were brought in large numbers, once they were taken over by the British and others their condition as an enslaved people was exploited. A class of Englishmen who had earned no considerable respect in England, came to the Islands as mechanics. Because their white face was a premium and because they were given privileges and guns and land and had access to African women, they considered themselves as belonging to the exploitive class. They literally exhausted themselves. But the Englishmen did not have the skills they found were needed on the islands and they began to disappear, physically, due to death from exhaustion or return to England. The African craftsmen began to replace them. We now see the beginnings of the Africans' inventive mind in the Caribbean Islands. The same thing was happening in parts of South America. Many times the English would bring over English-made furniture and there were some termites in the Caribbean. Some of these termites are still there, and when the termites began to eat up the soft wood in the English-made furniture, the African with his meticulous mind began to duplicate that furniture with local hard wood. This was done especially in Jamaica where they had large amounts of mahogany then. Jamaica does not have mahogany now because the mahogany forests were overcut to the point where Jamaica now has no considerable variety of mahogany. Some of the most beautiful mahogany in the world used to come from Jamaica.

As with the disappearance of the British craftsmen, when the African craftsmen began to emerge, something else began to emerge in the Caribbean Islands. A class of people whose crafts maintained plantations. The Africans say how important they had become and began to make demands. This is the origin of the Caribbean freeman. These freemen were free enough to communicate with other Africans, free enough to go back to Africa, and free enough to go to the United States. These freemen from the crafts class began to mix friendship with another group of freemen in the United States. Now, how did the freemen become free in the United States? Mostly in the New England states where the winters were so long that it was not economically feasible to support a slave all year round, when they could be used only for four or five months. Slavery would have been just as brutal as it was in the south if the weather permitted. In New England the slaves had become industrial slaves. A large number of them were employed as ship caulkers. In the era of wooden ships, every time a ship came in the caulkers would have to drill something in the holds of the ship to keep it from eroding and to keep it from leaking at sea. A large number of Africans became ship caulkers and a large number became industrial slaves and they began to learn basic industrial skills. Professor Lorenzo Green's book, *The Negro in Colonial New England* is specially good in explaining the details of this transformation during the period of slavery.

There were also slave inventors, but these slaves could not patent their own inventions. They had to patent them in the name of their masters.

Soon after the latter half of the nineteenth century, when the Africans understood that emancipation was not the reality they had hoped for, they began another resistance movement in the hope of improving their condition. They set up a communication system with all the slaves. There were no "West Indians," no "Black Americans." These were names unknown to us in Africa. We were and we saw ourselves as one people, as African people.

In the nineteenth century the Africans began the inventive period, and before the beginning of the twentieth century Africans had already invented some of the things that made life more comfortable for many in the United States. When you study a list of the numerous inventions of Africans you will find that they would invent things first and foremost to make life better for themselves. Benjamin Banneker was the first notable Black inventor. When the Africans arrived in the United States, in 1619, the year before the Mayflower people arrived, they were not chattel slaves, but indentured slaves. Indentured slaves worked so many years and then they were free. Most of the indentured slaves were whites. Many times whites and blacks did not see the difference in their lives. They were both exploited, and they both had to work so many years before they were free. Therefore, during this time, there was a period when Africans and whites saw no difference in their plight and this was before prejudice and color difference would set in. Many times they married one another and nobody cared; they were both slaves anyway. Out of these marriages came some people who helped to change the condition of the slaves in the United States. Benjamin Banneker was a product of one of these relationships. In his mother's time if a white woman had a Black lover and because of her whiteness she worked her way out of the indenture ahead of her lover, then she came and bought him out of the indenture and married him. No one took noticed.

Benjamin Banneker, literally, made the first clock in the United States. He dabbled in astronomy, he communicated with President Thomas Jefferson and he asked Jefferson to entertain the idea of having a secretary of peace as well as having a secretary of war. He was assistant to the Frenchman L'Enfant who was planning the City of Washington. For some reason L'Enfant got angry with the Washington people, picked up his plans and went back to France. Benjamin Banneker remembered the plans and Benjamin Banneker is responsible for the designing of the City of Washington, one of the few American cities designed with streets wide enough for ten cars to pass at the same time. This was the first of many of the African American inventors that we have with good records. There will be many to follow and I am only naming a few.

James Forten became one of the first African Americans to become moderately rich. He made sails and accessories for ships. During the beginning of the winter of the American Revolution it was noticed that the tent cloth they were using for the tents was of better quality than the cloths they had in their britches. James Forten, the sail maker, was approached to use some of the same cloth to make the britches for the soldiers of the American Revolution. These britches, made by this Black man, saved them from that third and last terrible winter of the American Revolution. Now, the role of Blacks in the American Revolution is another lecture in the sense that 5000 Blacks fought against the United States on the side of England in the American Revolution, and the English had to find somewhere for them to go after the war. They sent some of them to Sierra Leone, but some of them went to Nova Scotia.

Jan Ernest Matzeliger, a young man from Guyana, now called Surinam invented the machine for the mass production of shoes; this invention revolutionized the shoe industry.

In summary, African Americans continued to create inventions. They revolutionized the American industry. For example, Granville Woods not only revolutionized the electrical concept, but he laid the basis for Westinghouse Electric Company. Elijah McCoy invented a drip coupling for lubrication that revolutionized the whole concept of lubrication. He had over fifty patents to his credit and so many whites stole from Elijah McCoy that anytime a white man took a patent of lubrication system, or anything that related to it to the patent office, he was asked, "Did you steal it directly from McCoy or did you steal it indirectly from McCoy or is it the real McCoy?" This is how the word came into the English language, "the real McCoy."

In the closing years of the nineteenth century the greatest talent was that of Lewis Latimer. He was not

only a draftsman, but drew up the plans for the telephone, Alexander Graham Bell was the one who invented the telephone, but the patent that had to be drawn up, all the moving parts and all of the vital parts, was done by Lewis Latimer, a Black man. Latimer also did a few other things that don't make me to happy. He improved the Maxim gun that became the forerunner of the present day machine gun. He is also responsible for the florescent light. He wrote the first book on the incandescent light that you know as the fluorescent light. He worked with Thomas Edison. He was one of the Thomas Edison pioneers. While Thomas Edison created the principle of the electric light, his light went out in twenty minutes. But the man who created the filament made the light go on indefinitely. That was Lewis Latimer, and he deserves as much credit for the electric light as does Thomas Edison. And he and his accomplishments were completely left out of history. Only Thomas Edison's accomplishments are mentioned.

Not only did African Americans invent a lot of other things, including labor-saving devices, African Americans have played a major role in getting America into space. In space medicine the leading doctor is an African American woman. The person that designed the interior of the ship, including the disposal facility, is an African American man. When they sent some astronauts up without instructing them in his method of disposal of waste matter, a near catastrophe occurred. The space buggy that they used to walk on the moon was, basically, a Black invention and so is the camera that they used on the trip to the moon.

You might wonder that after all that the African Americans have contributed in making the United States comfortable, even to the coupling that hold all the weights together when trains are moving around the country, why are they having so much trouble, and why are they still having difficulty? Principally because we were not brought to the United States to be given democracy, to be given Christianity. We were brought to labor and once the labor was done, we were an unwanted population in the United States. We were a nation within a nation searching for a nationality.

When we put all of us together, we are larger, in number, than all of the nations in Scandinavia put together. Their population would not be as large as the African American population in the United States alone. According to the statistics of the United Nations and the *Jewish Year Book* all the Jews in the world would come to less than one-half the number of African American population in the United States. Yet Israel gets more financial aid than all of the African nations in the world put together. Principally because we have not developed the political apparatus to put the right pressures on the leaders in the world to make it [otherwise] so.

I see no solution for African peoples, any place in this world, short of Pan-Africanism. Wherever we are on the face of this earth we are an African people. We have got to understand that any problem faced by Africans is the collective problem of all the African people in the world, and not just the problem of the Africans who live in any one part of the world. Once we put all of our skills together, and realize that between the United States, the Caribbean Islands, Brazil and other South American countries there are 150 million African people, and the population of Africa has been counted as 500 million for over fifty years, implying that the African man has been sleeping away from home, and you know that is not true.

In the twenty-first century there are going to be a billion African people on this earth. We have to ask ourselves, "Are we ready for the twenty-first century?" Do we go into the twenty-first century begging and pleading or insisting and demanding? We have to ask and answer that question and we have to decide if we are going to be the rearguard for somebody else's way of life, or do we rebuild our own way of life, or will we be the vanguard to rebuild our own nation.

We have to say to ourselves when we look at our history, the great Nile Valley civilization, the kind of civilizations we built on other rivers, the Niger, the Limpopo, the Zambezi, the kind of civilizations that gave life to the world before the first Europeans wore shoes or had houses that had windows. We need to say to ourselves, with conviction, that "If I did it once, I will do it again."

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